ACH 2969 R

10

## CLAIMS

- 1. Fischer-Tropsch process for the conversion of carbon monoxide and hydrogen to C<sub>5</sub><sup>+</sup> hydrocarbon mixtures in which process use is made of Fischer-Tropsch catalyst particles and particles comprising zeolite Y with a water adsorption capacity (25°C, p/p<sub>0</sub>=0.20) of at least 16 wt%.
- A process according to claim 1 wherein a reaction mixture of carbon monoxide and hydrogen is contacted with the Fischer-Tropsch catalyst
   particles and the particles comprising zeolite Y.
  - 3. A process according to claim 2 wherein the Fischer-Tropsch catalyst particles and the particles comprising zeolite Y are dosed to the reaction mixture individually.

15

5

- 4. A process according to claim 3 wherein the Fischer-Tropsch catalyst particles and the particles comprising zeolite Y are dosed at different rates.
- 5. A process according to claim 2 wherein the Fischer-Tropsch catalyst particles and the particles comprising zeolite Y are used in the form of shaped bodies in which both particles are embedded.
  - 6. A process according to claim 1 wherein the Fischer-Tropsch catalyst particles are used in the second step of the Fischer-Tropsch process and the particles comprising zeolite Y are used in the third step of the Fischer-Tropsch process.
  - 7. A process according to any one of the preceding claims wherein the Fischer-Tropsch catalyst particles comprise iron.

25

WO 2004/041969 PCT/EP2003/012164

ACH 2969 R

11

8. A process according to any one of the preceding claims wherein the Fischer-Tropsch catalyst particles comprise cobalt.

9. A process according to any one of the preceding claims wherein a metal
5 compound has been deposited in or on the particles comprising zeolite Y.